

Work Order ID 66061

Thursday, February 03, 2011 11:43:16 AM

Page 1

Item ID: D4317-013

Revision ID: PRELIM

Item Name: Cover Panel Retainer

Start Date: 2/4/2011 Start Qty: 4.00

Required Date: 2/11/2011 Req'd Qty: 4.00

Reference:

Accept

Setup Start

Stop

Cust Item ID:

Customer:

POSITIVE  
RECALL

PRELIMINARY ISSUE

Run Start

Stop

Approvals: Process Plan: MF

Date: 11-02-03

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4317	PA1

100

0.00



Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg (D4317-11)

Dwg Rev: PA1

Prog Rev: PA1

2-Deburr if necessary

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

11-2-11

11-2-11



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 66061

Thursday, February 03, 2011 11:43:16 AM



Page 2

Item ID:	D4317-013	Accept		Setup	Start	
Revision ID:	PRELIM				Stop	
Item Name:	Cover Panel Retainer					
Start Date:	2/4/2011	Start Qty:	4.00			
Required Date:	2/11/2011	Req'd Qty:	4.00			
Reference:						
				Cust Item ID:		
				Customer:		

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120  QC Quality Control	QC8- Inspect parts - second check  Memo	0.00 - inspected to PA1 Dry only Suloruz (77)							
130  Small Fab Small Fab	Memo 1- C'sink holes as per dwg 2- Deburr holes if necessary 3- Install nut plate	0.00 0.00							
140  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00 - inspected to PA1 Dry only Suloruz (77)							

*Handwritten signature and date: 2/24/02/07 (7)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_






NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			



**NOTE:** Date & initial all entries



**Work Order ID 66061**

Thursday, February 03, 2011 11:43:16 AM

Page 3

Item ID: D4317-013 Accept  Setup Start   
Revision ID: PRELIM Stop   
Item Name: Cover Panel Retainer  
Start Date: 2/4/2011 Start Qty: 4.00  Cust Item ID:  
Required Date: 2/11/2011 Req'd Qty: 4.00  Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start   
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop 

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150  Packaging Packaging	Identify as per dwg & Stock Location: <i>B/C</i>  Memo <i>3 LEFT</i>	0.00  0.00							
160  QC Quality Control	QC21- Final Inspection - Work Order Release  Memo	0.00  0.00							

POSITIVE RECALL

EFFECTIVE *11-02-15* AUTH *MF*

RELEASED \_\_\_\_\_ DATE \_\_\_\_\_

*pull on  
#66051  
#66051*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Thursday, February 03, 2011 11:43:11 AM

Page 1

Work Order ID: 66061

Parent Item: D4317-013

Parent Item Name: Cover Panel Retainer

Start Date: 2/4/2011

Required Date: 2/11/2011

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A 11.02.02 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M304S16GA

Purchased

No

100

sf

227.0800

0.02777

0.116926



304/316 Sheet .063



B11-2-4

Location

Loc Qty

Loc Code

MAT

227.08

111323

0

116623

227.08

MS20426AD3-4

Purchased

No

130

Each

5,477.000

2

8



RIVET



116623  
8  
E 5/11/02/07  
14

Location

Loc Qty

Loc Code

ST316

5477

104374

1477

110398

4000

MS21075L4

Purchased

No

130

Each

71.0000

1

4



Nutplate



E 5/11/02/07

Location

Loc Qty

Loc Code

ST303

21

115837

21

ST353

50

115908

50

7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DART AEROSPACE LTD	Work Order: 66061
Description: COVER PANEL RETAINED	Part Number: D4317-13
Inspection Dwg: D4317-R, Rev:	Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

**X**

**x**

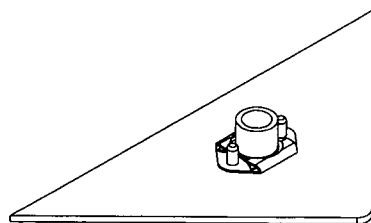
[illegible]

Measured by: IB	Audited by: S	Prototype Approval:
Date: 11-2-4	Date: 11/02/07	Date:

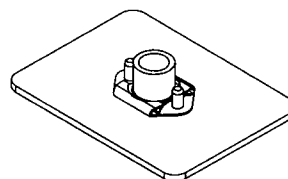
inspect to PAIDing

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

ITEM	QTY -011	QTY -013	P/N	DESCRIPTION
	X		D4317-011	COVER PANEL RETAINER
		X	D4317-013	COVER PANEL RETAINER
1	1		D4317-9	PLATE
2		1	D4317-11	PLATE
3	2	2	MS20426AD3-4	RIVET
4	1	1	MS21075L4	NUT PLATE



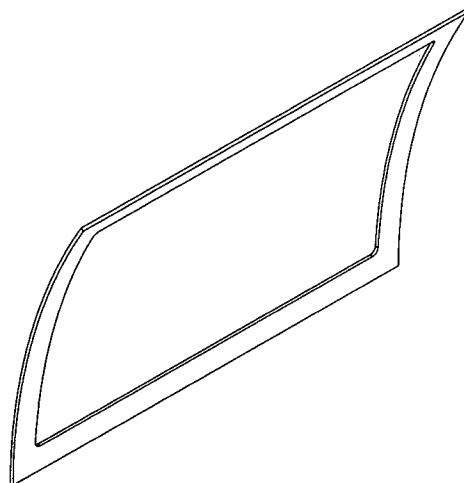
**D4317-011 COVER PANEL RETAINER**



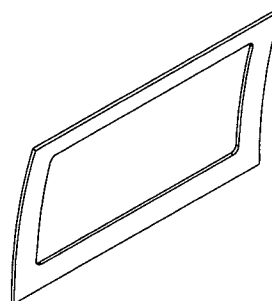
**D4317-013 COVER PANEL RETAINER**

**PRELIMINARY A1**  
11.02.01 (AJS)

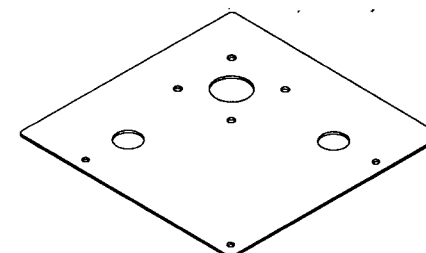
#60061



**D4317-1 VIEWING PLATE**



**D4317-3 WIRING PLATE**



**D4317-5 GPS PLATE**

A	NEW ISSUE	AJS	11.01.25
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO. <b>D4317</b>	
MFG. APPR.		REV. A SHEET 1 OF 4	
APPROVED		TITLE <b>VIEWING PLATE</b>	
DE APPR.		SCALE NTS	
DATE	11.01.25	<small>COPYRIGHT © 2011 BY DART AEROSPACE LTD  THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS  NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT  WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

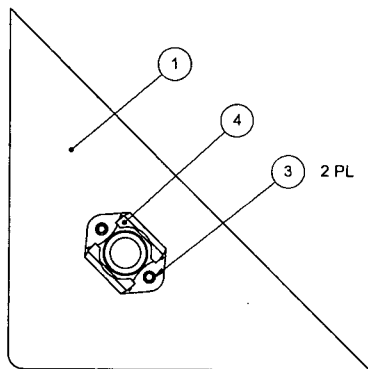
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

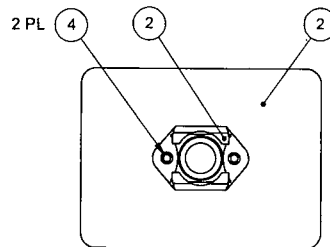
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

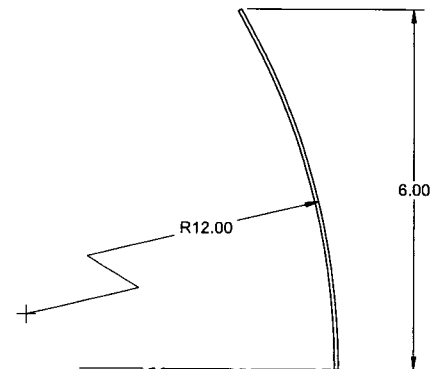
NOTE: Date & initial all entries



**D4317-011 COVER PANEL RETAINER**

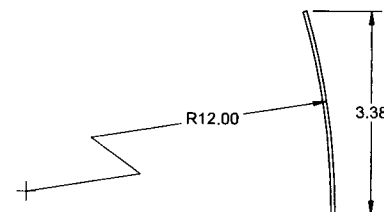


**043**  
**D4317-043 COVER PANEL RETAINER**



**D4317-1 VIEWING PLATE**

#66061



**D4317-3 WIRING PLATE**

**NOTES:**

- 1) MATERIAL -1: MAKE FROM D4317-1F  
-3: MAKE FROM D4317-3F
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4317-X" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT -011: 0.1 lbs  
-013: 0.06 lbs  
-1 & -3: SEE FLAT PATTERN WEIGHTS

**PRELIMINARY A1**  
11.02.01 (AJS)

DESIGN	CP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO. <b>D4317</b>	REV. A
MFG. APPR.			SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		<b>VIEWING PLATE</b>	NTS
DATE	11.01.25	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

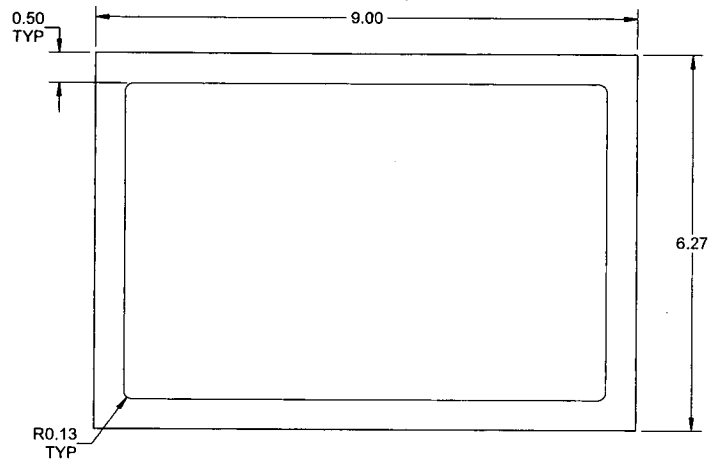
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

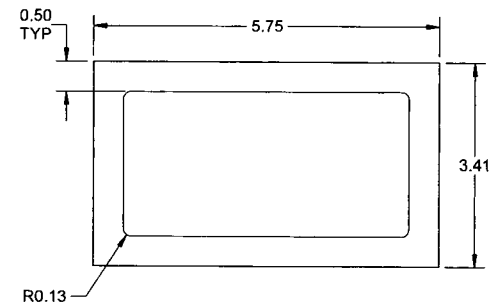
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



**D4317-1F VIEWING PLATE**

**PRELIMINARY A1**  
11.02.01 (AJS)



**D4317-3F WIRING PLATE**

*\$66061*

**NOTES:**

- 1) MATERIAL -1F, -3F: 303/304/316 STAINLESS STEEL SHEET ANNEALED 2B, 0.060 THK  
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240  
REF DART SPEC M304S16GA OR DART SPEC M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NA
- 7) WEIGHT -1: 0.26 lbs  
-3: 0.14 lbs

DESIGN	CP	<b>DART AEROSPACE LTD</b>	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. <b>D4317</b>	REV. A
MFG. APPR.			SHEET 3 OF 4
APPROVED		TITLE	SCALE
DE APPR.		<b>VIEWING PLATE</b>	NTS
DATE	<b>11.01.25</b>	COPYRIGHT © 2011 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESSED CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

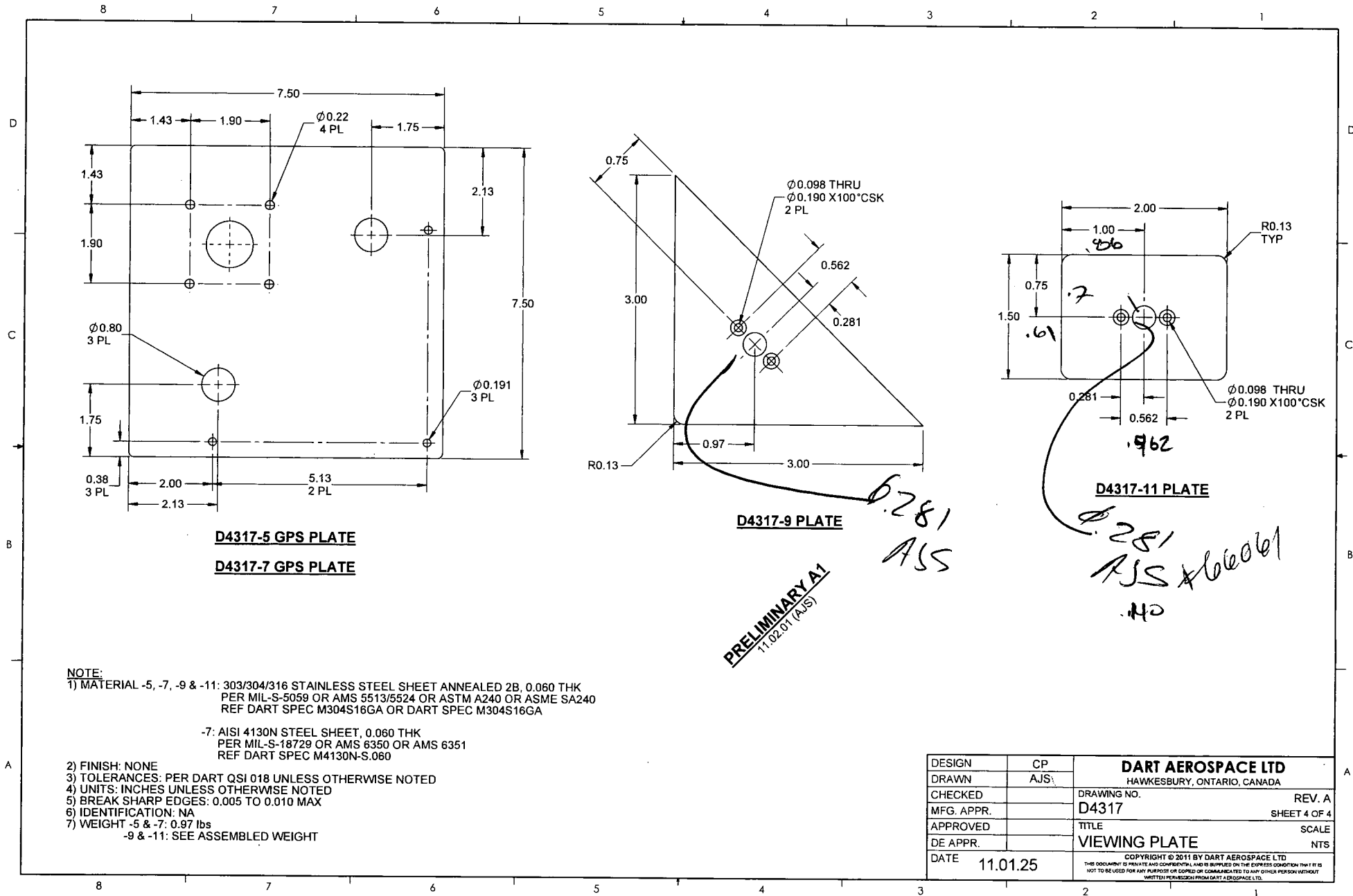
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

## Linda Lacelle

---

**From:** Alan Stocker <astocker@dartaero.com>  
**Sent:** February 7, 2011 11:22 AM  
**To:** llacelle@dartaero.com; kjohnston@dartaero.com; dduval@dartaero.com  
**Cc:** Mike Petsche  
**Subject:** NRCan Basket Part # Updates

Good Morning,

Parts have not been changed but some – numbers have been updated as follows:

D4316-3 ✓ is now: D4316-1

D4317-011 ✓ is now: D4317-041

D4317-013 ✓ is now: D4317-043

D4318-011 is now: D4318-041

~~6041 - 6057~~

~ 66058 —

66061 —

66065 —

Sorry for the errors

Alan Stocker

Mechanical Designer  
Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, Ontario  
CANADA K6A 1K7  
(613) 632 5200 x 229  
[astocker@dartaero.com](mailto:astocker@dartaero.com)  
<http://www.dartaero.com/>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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**NOTE:** Date & initial all entries

# Work Order Summary

Monday, February 07, 2011 12:57:50 PM

Page 1 of 1

Criteria : Work Order ID: 66057 Item ID: D4316-041 Product Family SMALL FAB  
 Work Order Start Dates 2/4/2011 to 2/4/2011 11:59:59 PM Work Order Required Dates 2/11/2011 to  
 2/11/2011 11:59:59 PM  
 All References  
 Work Order Status Released

Work Order ID 66057 Required Qty 4.0000 Status Code Released  
 Item ID D4316-041 Accepted Qty 0.0000 Scrap Qty 0.0000

Item Name Tube Assembly

Current Acct Value \$14.008

Sales Order ID

Start Date 2/4/2011 Required Date 2/11/2011

Completed Date

Standard

\*\* Actual \*\*

\*\* Acct. Value \*\* \*\* Variance \*\* \*\* Variance % \*\*

<u>Direct Costs</u>	<u>Total</u>	<u>Each</u>	<u>Each</u>	<u>Each</u>	<u>Each</u>
Material	\$0.000	\$0.000	\$4.263	\$4.263	100.00%
Labor	\$0.000	\$0.000	\$3.792	\$3.792	100.00%
Outplant	\$0.000	\$0.000	\$0.000	\$0.000	0.00%
Variable Burden	\$0.000	\$0.000	\$0.000	\$0.000	0.00%
Fixed Burden	\$0.000	\$0.000	\$5.953	\$5.953	100.00%
Material Burden	\$0.000	\$0.000	\$0.000	\$0.000	0.00%
** Total **	\$0.000	\$0.000	\$14.008	\$14.008	

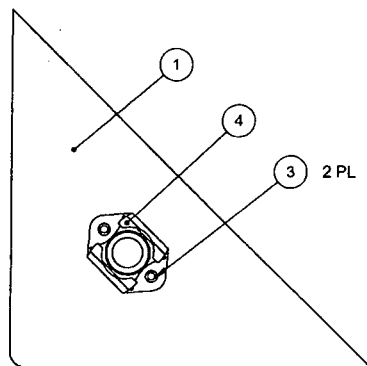
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

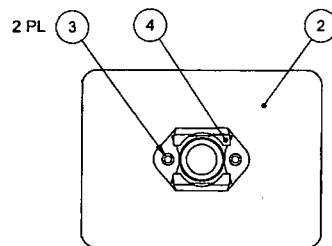
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

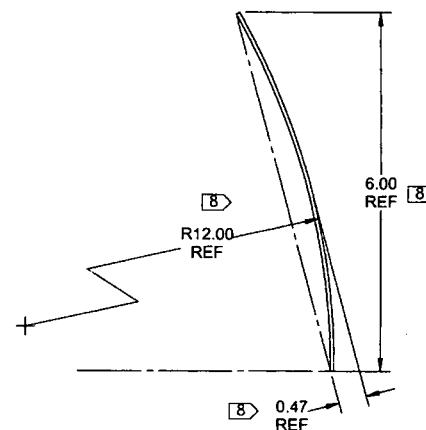
**NOTE:** Date & initial all entries



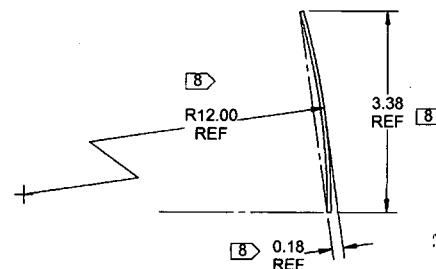
**D4317-041 COVER PANEL RETAINER**



**D4317-043 COVER PANEL RETAINER**



**D4317-1 VIEWING PLATE**



**D4317-3 WIRING PLATE**

**NOTES:**

- 1) MATERIAL -1: MAKE FROM D4317-1F  
-3: MAKE FROM D4317-3F
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT-041: 0.1 lbs  
-043: 0.06 lbs  
-1 & -3: SEE FLAT PATTERN WEIGHTS
- 8) FINAL SHAPE TO BE DETERMINED AT ASSEMBLY

**RELEASED**  
2011-03-03

DESIGN	CP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		<b>D4317</b>	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		<b>PLATE</b>	NTS
DATE	11.02.03	<small>COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	